## **HMMWV TOW Missile Carrier Up-Armored With Winch**

The M1046 and M1046A1 HMMWVs are TOW Missile Carrier configurations. The vehicles are equipped with supplemental armor and TOW launcher mounted on the roof of the vehicle. The vehicles are used to transport and launch TOW missiles. The M1046, and M1046A1 provide added ballistic protection for TOW system components, crew, and ammunition.

The weapons platform can be traversed 360 degrees. Weapon station azimuth is limited to 300° left and right of vehicle centerline when Vehicle Power Conditioner (VPC) cables are connected. With launcher installed, elevation is limited to 20° and depression is limited to 10°.

M1045, M1045A1, M1045A2, are also HMMWV TOW carriers and equipped w/supplemental armor and fully-loaded they can climb road grades as steep as 60% (31°) and traverse a side slope of up to 40% (22°) . The vehicles ford hard bottom water crossings up to 30 inches (76 centimeters) without a deepwater fording kit and 60 inches (152 centimeters) with the kit.

The M1046 is equipped with the self-recovery winch which can also be used to recover like systems. The M1045A1 and M046A1 models have the latest modifications applied to the vehicles. The difference between the M1045, M1045A1, and M1045A2 TOW carriers w/supplemental armor and the M1046 and M1046A1 TOW carriers w/supplemental armor is that the M1045, M1045A1, and M1045A2 do not have winches and the M1046 and M1046A1 do. The M1046 and M1046A1 are equipped with winches.

